

**Results:** Of the 84 patients included in the study group, in 8 cases (9.52%) were detected *Giardia lamblia* cysts. The epidemiologic investigation revealed that 5 patients were married, 2 were living in a student hostel, and one was living alone. All patients were professionally active and part of collective with over 10 individuals. Five patients presented a maculopapular urticarial eruption disseminated on thorax, abdomen and limbs, and accompanied by a moderately pruritus. All patients followed a diet and a treatment with albendazole ( $2 \times 200$  mg daily, 5 days), antispasmodics, antipyretics, calcium. Six of them required a hydroelectrolytic replacement with different infusions (Ringer, glucose, physiological serum). Three out of the 8 patients were ambulatory treated with antibiotics prior to hospitalization. Nevertheless the symptoms didn't remit and consequently they necessitated hospitalization. The stool exams of the family members (in 5 patients with families) showed the relevance of setting of the ambulatory antiparasitic therapy for the whole family. The outcome was favorable in all cases. Adverse reactions were minor and transitional: nausea in 3 cases, bitter taste 2 cases, and pyrosis 2 cases.

**Conclusion:** The early detection of giardiasis in patients with acute enterocolitis avoids unnecessary administration of antibiotics and allows the administration of the antiparasitic therapy with optimal clinical results and decrease the spread of this affection.

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#### Immunological changes in children with giardiasis

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**Background:** *Giardia lamblia* is an intestinal parasite which has been diagnosed with an increase frequency among Romanian institutionalized children. The aim of the present study was to assess peripheral blood lymphocytes populations and serum cytokine levels for IL-4 and IFN- $\gamma$  in children infected with *Giardia lamblia*.

**Methods:** Lymphocyte subpopulations were determined using flowcytometry and cytokines were quantified by sandwich ELISA.

**Results:** Total T cells, CD4+ helper T cells, activated T cells (HLA-DR+ or CD25+) and NK cells did not differ significantly between children with *Giardia lamblia* infection and aged-matched healthy controls. In contrast, CD8+ T cell were elevated in *Giardia lamblia* ( $34.42 \pm 6.08\%$ ) infected children compared to controls ( $27.66 \pm 2.15\%$ ). B cells were significantly reduced in the peripheral blood of children with giardiasis ( $16.89 \pm 2.44\%$ ) compared to healthy controls ( $26.41 \pm 4.12\%$ ). IL-4 was detected in higher con-

serum of healthy children. IFN- $\gamma$  levels were elevated in children with giardiasis ( $5.7 \pm 5.04$  pg/ml) compared to controls ( $0.79 \pm 0.47$  pg/ml).

**Conclusion:** Our data suggest that *Giardia lamblia* infections in children may be accompanied by systemic immunological changes.

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#### IgG antibodies relative avidity as a phase-specific diagnosis for toxocariasis in populations of Venezuela

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**Background:** IgG-Avidity ELISA has been recently developed in toxocariasis as a useful technique for ruling out recently acquired infections. Avidity of antibodies increases with time after antigen challenge and the measurement of the avidity has been used to diagnose various infections especially when differentiation of recent and distant infections is crucial.

**Methods:** In this study we focused on a method for distinguishing acute and chronic *Toxocara* infection in children and adults, the basis of which was the assessment of specific IgG antibodies avidity. We studied 400 serum samples collected from populations in Venezuela (aged 1–65y, 52% male).

**Results:** From this population screening with a validated ELISA (with locally prepared *T.canis* excretion-secretion antigens) we serologically diagnosed 71.25% of them (62% 1:128dils). From these serologically positive patients we evaluated the *Toxocara*-specific IgG avidity, which was measured employing the dissociative method using urea as a denaturing agent and the calculation of a relative avidity index. The relative avidity index was calculated as the ratio of IgG values in sera treated with urea and the value of IgG in nontreated sera ( $\times 100$ ). Values on this index)50 were considered as low avidity (indicating recently acquired infection) and those  $>50$  were considered as indicative of high avidity (chronic infection). In the sera from these patients low index of IgG antibodies avidity was shown in 71.25%; 50% of these patients presented avidity values)33. These values were independent of the ELISA titers of these patients ( $t=0.207$ ;  $p=0.837$ ), age ( $F=0.234$ ,  $p=0.631$ ), sex ( $t=0.624$ ;  $p=0.536$ ) and epidemiological risk factor such as dog ownership ( $t=0.955$ ;  $p=0.348$ ). In the group of patients with titers of 1:32dils mean avidity was 32.7 (low index of IgG), in those with 1:128dils mean avidity was 31.9 (low index of IgG) ( $p>0.05$ ). Compared with IgG avidity test, conventional ELISA had just 32.9% of specificity (95%CI28.2–38.0).

**Conclusion:** These results, as other previous, suggest that measurement of specific IgG avidity (which is independent of the ELISA titers) may assist in the discrimination between